

ABSTRACT

A motor structure resistant to liquid intrusion features two modules, the first having an electronically commutated external-rotor motor (20), which motor comprises an internal stator (22) that is arranged on a bearing tube (30) and is separated by a first air gap (24) from an external rotor (26; 92), which latter comprises a rotor cup (40) that is open at one end and is joined at its other end to a shaft (46) that is journaled in the bearing tube (30), further having a permanent-magnet arrangement (76), arranged at the open end of the rotor cup (40), for magnetic interaction with a second permanent-magnet rotor (92), forming part of the second module. The first module is separated from that second rotor (92) by a second air gap and forms therewith a magnetic coupling (94), so that a rotation of the permanent-magnet arrangement (76) brings about a rotation of that second rotor (92). A hermetic separation of the two modules is accomplished using a non-ferromagnetic separating element (82) arranged in the second air gap. The second module can safely be used to handle liquid, e.g. as a pump.